THE HEALTH EDUCATION JOURNAL

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Editorial

It is encouraging to note a heightening of interest in health education in schools. The British literature now shows an increasing number of original papers reporting the results of experimental work which support our claim that the specialised methods which have been successful with adult groups also have their place in schools. It is significant, however, that research has been conducted principally with secondary school pupils. The latter are on the edge of adult life, and indeed, in our sophisticated society, many are adult in outlook. We should like to see more experimental work conducted with primary and junior school children. Have we any idea of their needs, or are we to assume that they are confined to the relatively simple matters of personal hygiene, good habits, etc ?

There is a need for the general reorientation of school health education. Dr. Gordon-Smith (page 129) has contrasted the image of the older type of health educator with the modern philosopher-sociologist, with a "sound background of biology, nursing or medicine". It is urgent that this new image be presented to all teachers and, more especially, to students in training colleges. From time to time we hear a distant rumble of discord which suggests that health education is being devalued in some training colleges. There is talk of the subject's being no longer compulsory for the final examination. So long as there are examinations, any subject which is demoted in this way will be demoted in the eyes of students. As in so many branches of learning, we are defeated by terminology. Most of the corpus of modern health education *seems* to overlap other subjects. Is this not true of any studies—is it possible to study history without including geography, for example ?

On the other hand health education as defined (in pragmatic terms, unfortunately) by W.H.O. should have no anxieties in making its case to be an academic subject in its own right, with departmental status. The idea that the subject is distributed in penny packets about

all departments and that it is ipso facto "covered"—a soothing word—must be challenged.

Although we are apparently still in a minority, we believe that Ministry of Education Pamphlet No. 31 is the best directive on the subject yet. An academic department could well take it as a guide to development of the subject and provide its students with a background from which they could construct their own code of practice.

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THE WHOLENESS OF MAN

Reflections on the death of Carl Gustav Jung

By ALFRED TORRIE, M.A., M.B., B.Ch., D.P.M.

For health education in the fullest sense, we must add to the principles of physical hygiene and mental hygiene the idea of a soul. We cannot have full physical health unless we are also mentally healthy, and we cannot have full mental health unless we are spiritually healthy.

The man who stressed these principles died last June. He wrote a book called *Modern Man in Search of a Soul*. Carl Gustav Jung lived to be 85 and died a lonely man. He has a number of followers who imitate him but are afar off. He was a pioneer explorer in the inner world of man's mind, and was at home in the primitive area of the collective unconscious where man struggles to free himself as an individual—the individuation process, as Jung termed it. He was originally a disciple of Freud and was the first president of the International Psycho-Analysts. He found, however, that Freud did not go far enough, but remained at the purely biological level of man's development.

Jung went on alone to search for the soul of man. He coined several phrases to explain this—"the transforming symbol", "the unifying principle", "the integrating factor". Freud denied the existence of the soul and called it an illusion. He now has millions of disciples while Jung has only a small group in several countries. Freud's thesis that religion is infantile wishful thinking is true of most religious bodies. But in discarding religion he threw away the baby with the bathwater. Jung always stressed the empirical. He showed again and again that when man found his soul he was mentally and physically more healthy.

Jung is often associated with the words "extrovert", "introvert", "complex", "archetype", "symbol", etc., but to me his greatness lies

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Jung is often associated with the words "extrovert", "introvert", "complex", "archetype", "symbol", etc., but to me his greatness lies

in the fact that he emphasised that man will not be as healthy as he could be unless he is whole in body, mind and soul.

In addition to his study of the individual, Jung investigated the behaviour of groups, tribes and nations in Asia, Africa and Central America. These researches revealed that the deep mind of man shows, in all parts of the world, the same evidence of the historical process evolving—the collective mind of man. As our bodies contain evidences of our past evolution (gill clefts, appendix, etc.) so our minds show the traces, in dreams and national behaviour, of our animal ancestry. The unifying principle is at work all the time with its integrating process.

Jung's psychology was teleological, as opposed to a determinist robot-like repetition of conditioned reflexes laid down in the early years. Such patterns do rule most of men's lives, but Jung says that the mind of man has always the potentiality of breaking out of the repetition pattern. J. B. Priestley, who wrote a very fine tribute concerning his indebtedness to Jung's work, illustrates this process in his series of "Time" plays. Toynbee, in his volumes of history, owes a great deal to Jung's philosophy. Yet Jung claims, and I think rightly, that his writings were the results of his discoveries in the realm of the inner world of patients' minds. He found parallels to man's search for a soul in the myths that are the psychological truths of mankind's developments.

He has been called a mystic, but there was nothing mystical about him when I spent two hours with him in his study in 1947, just after he had recovered from his first serious illness. He was not an ascetic divorced from reality, but was quite fond of the good things of life: wine, food, tobacco. He had a fund of humour and a deep humility.

The following quotation from one of his books indicates Jung's belief that helping the patient towards health depends very much on the doctor's own personality:

"The doctor is confronted with the necessity of conveying to his patient the healing fiction, the meaning that quickens—for it is this that the patient longs for above all that science and reason can give him. The patient is looking for something that will take possession of him and give meaning and form to his neurotic mind . . . What will he (the doctor) do when he sees only too clearly why the patient is ill? when he sees that it arises from having no love, but only sexuality; no faith because he is afraid to grope in the dark; no hope because he is disillusioned by the world and by life; and no understanding because he has failed to read the meaning of his own existence?

"Certain patients' confessions are hard even for a doctor to

swallow. Yet the patient does not feel himself accepted until even the very worst in him is accepted too. No one can bring this about by mere words; it comes only through the doctor's sincerity and through his attitude towards himself and his own evil side. If a doctor wants to offer guidance to another, or even to accompany him a step of the way, he must be in touch with this other person's psychic life. He is never in touch when he passes judgement. Whether he puts his judgements into words or keeps them to himself makes not the slightest difference. To take the opposite position and to agree with the patient offhand is also of no use, but estranges him as much as condemnation. This is what I mean by unprejudiced objectivity. It is a moral achievement on the part of the doctor, who ought not to let himself be repelled by illness or corruption. We cannot change anything unless we accept it. Condemnation does not liberate, it oppresses. I am the oppressor of the person I condemn, not his friend and fellow sufferer. I do not in the least mean that we must never pass judgement in the case of persons whom we desire to help and improve. But if the doctor wishes to help a human being he must be able to accept him as he is. And he can do this in reality only when he has already seen and accepted himself as he is. We can get in touch with another person by an attitude of unprejudiced objectivity. This may sound like a scientific precept and may be confused with a purely intellectual and detached attitude of mind. But what I mean to convey is something quite different. It is a human quality, a kind of deep respect for facts and events and for the person who suffers from them—a respect for the secret of such a human life. The truly religious person has this attitude. He knows that God has brought all sorts of strange and inconceivable things to pass and seeks in the most curious ways to enter a man's heart. He senses in everything the unseen presence of the divine will."

THE SCHOOL HEALTH SERVICE AND HEALTH EDUCATION

By ALLAN WITHNELL, B.Sc., M.D., D.P.H.,
Divisional Medical Officer, West Riding of Yorkshire.

THE School Health Service in this context is considered to comprise : school doctors and nurses ; school meals ; school clinics and the general administrative machinery of the service. The schools themselves will be considered only so far as the facilities provided in them influence the children's attitude towards healthy living. The clerical staff are not often directly concerned in health education, although they are of course essential to the smooth running of the service. The influence of a well-trained teacher, because of her closer relationship with the children, is bound to be greater than that of the school doctor or nurse, but the role of the teacher in health education is outside the scope of this article.

The term health education is here taken to include any activity or environmental factor which teaches or indicates healthier ways of living. Such activity will include not only formal talks by the school doctor or nurse, but also their general behaviour and example in the school and clinics. The environmental factors will include not only general hygiene of the schools and clinics in a physical sense, but also the emotional atmosphere in these places.

The effectiveness of the various methods and media in health education is difficult to determine. It is known that general teaching methods do result in both increased knowledge and changed attitudes in schoolchildren, and it seems reasonable to suppose that such methods will also be effective in the field of health education, except that, in this field, changed attitudes are more important than increased knowledge. Similarly, it is generally accepted in commercial advertising that films, posters and the like do influence people to

behave in certain ways, and it seems reasonable to suppose that such media will also be effective in health education.

There are two factors which will tend to increase the effectiveness of the health educator in schools. First, the children are relatively free from prejudice, and learning is accepted as part of the daily routine. This makes the school the place *par excellence* for health education. Secondly, medical subjects are interesting in themselves.

The specific factors which reduce the effectiveness of health education will be discussed later. The principal factor militating against success lies in the ultimate aim of the teaching. The aim in health education is not merely to impart knowledge but to create attitudes of mind and to change ways of living. To teach, for example, that the angles of any triangle add up to 180 degrees is important, but such facts do not change behaviour and are not expected to do so. The aim is fundamentally different in teaching, for example, the importance of washing the hands after using the toilet. Such teaching has certainly failed unless it leads to altered behaviour. The " learning " of such a fact, in the sense of merely committing it to memory, is of no value in itself.

The role of the school health service in health education can be considered under the following headings :

1. Formal talks given by school doctors and nurses
2. Routine visits to the school by the doctor and nurse
3. The general hygiene of the school
4. The school meals service
5. Visits of children and their parents to the clinics

Formal talks

The limitations of the formal lecture are not sufficiently appreciated ; only a fraction of the material tends to be retained for any length of time. Formal talks by school doctors and nurses are usually given to older children—generally beyond the age of thirteen or fourteen years. All such talks should be short (probably not longer than half an hour), and should if possible cover only one subject. The method of presentation will depend on the age of the children concerned. An authoritative statement such as, " The teeth should always be cleaned after breakfast and after supper," will tend to be accepted by younger children if repeated often enough. With older children, however, it is necessary to give the reasons for the statement.

The talk should naturally be made as interesting as possible, visual and other aids being used whenever appropriate. It is

important that all these aids should be in first-class condition. Children of today are used to a high technical standard of equipment, and the influence of the speaker will be lessened by scratched films and badly executed drawings. Notebooks kept by the children can be valuable, but these should be used sparingly and the children should be told what to write in them. Note-taking is an art which will not have been acquired at this age.

Plenty of time should be allowed for discussion, with a summing-up at the end. It is during the discussion that the material presented can most firmly take root. This interchange of ideas is also valuable to the doctor or nurse in planning future talks, because it gives an indication of the attitudes and misconceptions of the children on the material presented.

It is the policy of the Ministry of Education that all school nurses should possess the Health Visitor's Certificate, and so school nurses can be expected to play an increasing part in health education in the future. It is unfortunate, however, that in many of the D.P.H. and H.V. Certificate courses, insufficient time is given to the technique of imparting knowledge. It must also be said that, since the most important single factor in effective lecturing is the personality of the speaker, doctors and nurses should not be compelled to undertake this work if they are not attracted to it.

Routine visits to schools

Visits by the school doctor will generally be for routine examination of the children, and it is this examination which provides the most valuable opportunity for health education. This is particularly true of the entrants' examination, since the attendance of parents at this examination approaches one hundred per cent in most areas. The younger the child the more receptive do mothers seem to be to advice on health subjects. A few words by the doctor at this time can have a greater impact than scores of posters and leaflets. Furthermore, if the doctor is seen to be friendly and approachable, then not only is advice more readily accepted, but the mother is more likely to seek help earlier if the need should arise in the future. There is no reason why the child should not enjoy the experience of a routine examination, and this helps to foster the belief that doctors are helpful people who need not be feared.

The nurse also routinely visits the school for cleanliness inspections and for eye testing. It is the cleanliness inspections which provide the greater opportunity for health education, because advice on a wide variety of topics, such as care of the hair, suitability of foot-

wear, etc., can be directed specifically to those children most in need of it.

Routine visits to the school by the doctor and nurse also provide an opportunity for discussions with the headteacher and his staff. When the teachers themselves become more conscious of the importance of health education, there is virtually no limit to the opportunities of including it in ordinary school subjects. For example, in history, the children can learn of the work of such benefactors to mankind as Jenner and Pasteur. In biology, the marvellous creation of the human body can be described. In English lessons, essays can be set on health topics, and in art, health education posters can be designed. In arithmetic, problems can be devised involving the incidence of various diseases, or the acceptance rates of various immunisation procedures. In chemistry the requirements of a healthy diet can be analysed. In physics, standards of heating and lighting can be explained in terms of the needs of the human organism. At a more elementary level, simple principles of healthy living can be written on the blackboard for copying by the children, and lessons in reading and dictation can similarly be adapted to serve this dual purpose.

General hygiene in schools

The school should be light, bright, warm and well-ventilated, and have adequate toilet facilities. It is important for the school doctor to report to the principal school medical officer whenever conditions are inadequate. Just what constitutes adequacy will vary with the observer and with the area, but there should be a constant attempt to raise the standards of school hygiene.

Adequate light is particularly important in schools since the eyes are involved in a great deal of close work. Provided lighting is adequate, there is no reason to suppose that the normal eye is adversely affected by any amount of reading and writing. Once children are accustomed to good lighting in schools they will be less tolerant of poor standards in their own homes, and this is true of hygienic standards generally. It is also worth remembering that sunlight has a lethal effect on many pathogenic organisms.

Bright colours in the fabric of schools are important mainly for the psychological effect on the children. There is less motivation to be clean and tidy in a dingy and badly decorated school. Such a school is also harder to keep clean, and there is less reason for the school cleaners to take a pride in their work. Furthermore, the better the school is decorated the less will be the tendency for

children to deface walls and destroy fabric.

Adequate ventilation of the classrooms is important for two reasons : to reduce the water content of the atmosphere, and to keep the bacteriological count to a minimum. The oxygen and carbon dioxide content of the air in the average classroom need not be considered. A high humidity leads to apathy, thus making learning more difficult, and a high bacteriological count increases the possibility of cross-infection. It is one of the duties of school doctors and nurses to acquaint both teachers and scholars with these facts.

Ventilation of the classroom is closely associated with the adequacy of heating arrangements, because when heating is inadequate there is a natural tendency to reduce ventilation by closing windows.

It is a sorry fact that the toilet facilities in many schools are now below the standard of those which the children enjoy in their own homes. To attempt to teach the importance of washing the hands after using the toilet, and then to provide only cold water and a dirty roller towel is to make a difficult task virtually impossible. In many hundreds of schools, furthermore, the washing facilities are not placed near the lavatories. Indeed, the two are often separated by the playgound, and this is the worst arrangement that could possibly be devised.

School meals

When school meals were first introduced, over fifty years ago, their only aim was to prevent malnutrition. In the more affluent society of today, the educative function of school meals has become increasingly important. They enable children to acquire a taste for the right kinds of foods, and they can introduce foods which are either new or prepared in a novel way.

School meals are also valuable in the teaching of manners and social graces, such as the correct way of using a knife and fork. It is surprising to find that even today some children, when they first stay for a meal at school, will eat it with their fingers. The most valuable lesson that can be learned at school meals is the vital importance of cleanliness—not only of the food itself, but of the hands and the utensils. It is helpful to have a rota of older children to inspect the hands, and particularly the finger nails, of those sitting down for the meal. Dirty crockery and cutlery must never be tolerated under any circumstance, and it is useful to teach children that if utensils are not handled correctly they can be potentially dangerous, even though they appear clean. It is still common for

children laying tables to hold a bundle of knives and forks by the blades and prongs instead of by the handles. And it is not unknown for some item of cutlery to be dropped on the floor and then immediately placed on the table.

School doctors and nurses normally have no responsibility for the content of the meals, but they should occasionally witness the serving of them, and also inspect the kitchens. The points to look for in the inspection of the kitchens lie outside the scope of this article.

Visits to clinics

The points made in discussing the general hygiene of schools apply also to clinic premises. There are two further factors which require consideration : the emotional atmosphere of the clinics, and the display of posters and leaflets.

A visit to the clinic will often be for some procedure, such as an injection, which tends to produce apprehension in children and their parents. A friendly and sympathetic approach by all the clinic staff is therefore particularly important. This not only improves the relationship with the public generally but also encourages subsequent attendance at the clinic. Cheerfulness is infectious, and a smile is universally understood, even by the youngest child.

The public often judge the whole of a service by the attitude of the lowest paid member of the staff. An unsympathetic junior nurse or clerk can easily prejudice a child or parent against the clinic generally. Even the wording of the appointment card can influence both the defaulter rate and the attitude of those attending. Stilted and formal language has no place in the vast majority of letters and cards addressed to parents.

The waiting time in clinics should, as a matter of common courtesy, be kept to a minimum, but some waiting is inevitable, and it is during this time that posters and leaflets will most often be noticed and read. Posters which have obviously been on the walls for months, and old and torn magazines are unfortunately common in many clinic waiting-rooms. This health education material must be changed frequently—at least monthly—if a valuable opportunity is not to be lost. On some topics, such as the importance of various protective inoculations, more or less continuous propaganda is necessary. But with most health education material it is better to concentrate for a week or two on some particular topic, and then change it. During this period, both the posters and the leaflets should be pressing home the same message. The organisation of

such propaganda is simplified if it is planned centrally, so that all the clinics in an area are displaying the same material at any one time. Even greater effectiveness can be achieved if the subject chosen for a particular period is topical, or if it coincides with a nationally organised campaign.

One important part of the school health service —the care of handicapped children—has not been given a separate heading in this article because its relationship to health education can be dealt with very briefly. It is now generally accepted that a handicapped child should attend an ordinary school whenever possible, and the problems of this situation, when rightly handled, can be a valuable experience to all concerned. It is vitally important that both the teachers and the other pupils adopt a sympathetic but otherwise unemotional attitude towards the handicapped child, and treat him as normal so far as the handicap allows. The class will tend to assume the same attitude as the teacher adopts. This is particularly true in the case of the epileptic child.

There are powerful factors always working against the health educator. This is because :

(1) The results of ignoring advice tend to be in the distant future, e.g. smoking and lung cancer.

(2) The results of ignoring advice tend to affect others rather than the child concerned, e.g. failing to wash hands after using the toilet.

(3) The advice often leads to an immediate loss of pleasure, e.g. the avoidance of sweets.

(4) The process of acquiring the desired habit gives no immediate pleasure, e.g. teeth-cleaning.

(5) A great deal of commercial advertising, e.g. that health is assured by consuming a particular product, militates against the inculcation of healthy habits.

It is only by working untiringly, with the best techniques and facilities obtainable, that these adverse factors can be overcome. The work is undramatic, but there is no knowing what far-reaching changes can be wrought, for it is undoubtedly true that the children can themselves educate their parents.

HEALTH EDUCATION IN SCHOOLS

By D. J. GORDON-SMITH, M.B., B.Ch., D.P.H.,
Deputy Medical Director, Central Council for Health Education.

FOR many years now, teachers have realised that the teaching of the three R's is by no means the whole task in the education of young people. As civilisation progresses, and society becomes more and more complex, so the function of schools has become more variegated. Young people now need a wide range of knowledge and skills to enable them to hold their own in a highly competitive and industrialised community.

This extension of activities is placing an ever-increasing burden on teachers. School curricula are constantly being expanded. Teachers are expected to be familiar with an incredibly wide range of topics. And consequently they are naturally inclined to react cautiously to suggestions that further subjects should be taught at school. Thus a very strong and reasoned case must be made for more time to be devoted to any particular subject. Up to the present, health education has had scant attention in most schools. But it seems now that more health teaching is becoming imperative.

Much ill-health can be prevented. The history of the work of public health departments shows that man's environment can be effectively controlled and contagious diseases can be virtually eliminated. This, with the provision of personal health services, has resulted in a community where good health is the general rule.

But further improvements in the national health will make direct demands on the individual. An actively healthy way of living must replace a passive acceptance of healthy conditions. This implies a change in community behaviour and outlook. When patterns of

individual behaviour have become established, they are difficult, if not impossible, to change. In the formative years of life, parents and teachers have the greatest influence on the growing child. Thus teachers, if they foster a positive attitude to health in schools, can have a very profound influence on future community well-being. This is preventive medicine in its widest sense.

A small survey of the attitudes and habits of children attending a secondary modern school in Manchester was made by Dr. W. Emrys Davies in 1957[1]. This survey is not necessarily representative of all schools, or even of secondary modern schools, in an industrial area. It does, however, give some idea of the needs of some pupils at one school in 1957.

Dr. Davies found that a third of the pupils did not belong to any youth organisation, a third belonged to a single-sex club, and a third belonged to a mixed club. Boys and girls of these ages sought companionship among their contemporaries. Few preferred the family circle.

Forty per cent did not include physical activity on their list of outstanding interests. Both sexes enjoyed being entertained by television, cinema, rock-'n'-roll and by watching games. Comics formed the bulk of reading material (this applied to the age range $13\frac{1}{2}$-$14\frac{1}{2}$). Two-thirds of the pupils spent an average of $2\frac{1}{4}$ hours most evenings watching television.

One-quarter of boys aged 13-14 had begun to smoke. With the age group $14\frac{1}{2}$-$15\frac{1}{2}$, half the boys and one-fifth of the girls were smoking regularly. Many other surveys all over the country have amply confirmed this finding.

Most of the pupils lived in modern houses equipped with baths and a hot-water supply, yet two-thirds took a hot bath only once a week. Only one-third of the pupils consistently washed their hands after using the toilet. Half the boys and a quarter of the girls cleaned their teeth only occasionally.

Two-thirds of the pupils failed to identify correctly the various internal organs of the human body which were displayed on a diagram. Enquiries showed that little human biology teaching had been provided. Some of the girls who were to remain for a fifth year would receive instruction in human physiology, but the boys would receive none. Following a discussion with a group of 32 fifteen-year-old boys and girls, in which the subjects of disease and heredity were raised, there was a unanimous opinion that such topics should find a place in the school curriculum.

Another opinion on the needs for health education in school was

expressed by the Chief Medical Officer of the Ministry of Education in his last report [2]. Among causes of ill-health, he mentions that at the 1951 census nearly 5 million households in the U.K. were without a piped water supply. About a quarter of a million children are still found to be verminous when examined in school.

It is a grim fact that every year in England and Wales over 21,000 people die from cancer of the lung. The subject of smoking and its connection with cancer of the lung and, indeed, its effect on those with bronchitis, is one that should be included as a matter of urgency in programmes of health education in schools. There is abundant evidence that many older school children smoke. In a survey conducted by the London School of Hygiene and Tropical Medicine in a county borough near London in 1959 [3], it was found that 35 per cent of 15-year-old secondary modern schoolboys smoked regularly. In another survey, in 1958, of 8,000 children in Oxfordshire schools, [4] 1,573 were confirmed smokers. The majority of children who smoked came from families where one or both the parents were smokers. These children spent some £4,350 annually on cigarettes. Only half of these smoking children had heard of the relationship between cigarette smoking and lung cancer. In 1955, the total sale of tobacco was 246 million pounds. In 1958, the total sales amounted to 260 million pounds.

These reports give some indication of the constant and pressing need for the health education of young people. After the age of 15, a substantial proportion of young people are no longer accessible. Thus it is essential that such education be done in schools.

Health education does not only mean callisthenics and injunctions to get plenty of fresh air and exercise. Many other topics should be included. The "health educator" of yesteryear was a ruddy, athletic extrovert who swam manfully through the ice on the Serpentine on Christmas morning. The health educator of to-day is essentially a philosopher and sociologist, with a sound background knowledge of biology, nursing or medicine. For the problems of today consist not of promoting good health, which is inevitably inherited in a society with adequate environmental control and a high standard of nutrition, but of maintaining that health and encouraging people to enjoy their good fortune.

Human relations

Perhaps most important of all is education in human relations. Adolescents are deeply interested in, and often anxious about, relationships within their own age group, with parents and teachers,

and indeed with the world at large. They need mature and wise advice about the development of their personalities, about maintaining a wide circle of acquaintances, and some understanding of the causes of emotional insecurity in others. The process of adjusting to social living is necessarily a difficult one; Western social structure is complicated and devious, and a teacher, nurse or doctor can offer valuable assistance. In his address to the National Association for Mental Health conference in 1955, Professor F. A. E. Crew said "Man, as we have reason to know, is a gregarious animal; he seeks, and apparently enjoys, the company of others and one of the reasons why human societies have elaborated themselves was that in them the individual could satisfy his yearning for companionship". Good human relationships in marriage, in the home, and at work are essential for the full enjoyment of life and for maintaining emotional security; such a vital topic can and should be taught in all schools.

Use of leisure

Young people today earn some £100 million a year. As a group they have more free spending money than any other section of the community. On average their working hours are shorter than ever before. Commercial interests have not been slow to take note of this situation and to exploit it to the full. Some of this exploitation is harmless. Much of it is unprincipled and absolutely unscrupulous. For example, the motif of sex is being used to encourage young people to smoke, and advertisers know that sex is probably the most effective hidden persuader. To encourage people to smoke is in fact encouraging a lethal habit. A cursory examination of the advertisements in any underground station will show that most of the advertising is directed at young people; the commercial world suggests that they should spend their £100 million on pop records, lingerie, beer, foundation garments, love magazines and after-shave lotion.

Apart from shorter working hours and higher wages, adolescents today enjoy more freedom, money and time. Education in the use of leisure could be contained in the school curriculum.

Leisure activities should be participatory; evidence suggests that many young people are merely passive onlookers during their leisure hours. This may be a reflection of a general trend in our times; the Albemarle report[5] suggests that many new avenues for active participation in recreation be opened for young people. The majority of youth is enthusiastic and often fanatically idealistic; the community as a whole will be the poorer if these virtues are not encouraged.

Parentcraft

Within five years of leaving school the majority of girls will be young mothers; this is a task that will occupy them for a large portion of their lives. In bringing up children the emphasis has up to now been on providing for their nutritional and physical needs, but there is a growing realisation of the fact that infants and children also have complex emotional and psychological demands and problems. Young mothers should have some understanding of the minds of young children. Perhaps even more than good food and good clothes, children need emotional security within the home, and prospective parents need to be clearly told that their attitudes towards their children will have the most profound influence on their emotional development. Constant parental friction, indifference to, or rejection of, the child, or overprotection and mollycoddling can permanently destroy emotional stability.

Parentcraft classes can be conducted in the antenatal clinic, but the elements of such teaching could be given at school. Such classes have already been started in this country and in France.

Sex education

Very few people disagree that this topic is best taught by parents in the home. But it is common experience that large numbers of parents are unwilling or unable to speak frankly to their children. Random questioning of young people in clubs in the south of London show that only a small minority have had any instruction from their parents, and the majority have never received information from anyone apart from street-corner gossip with their contemporaries. Few have ever had access to books on the topic.

Approximately five per cent of all babies born in Britian are illegitimate; the amount of suffering and human degradation involved is incalculable. It is estimated that something like 100,000 illegal abortions are procured annually, the majority by married women who probably have no knowledge of contraceptive techniques. Unmarried mothers are not necessarily wicked, vicious, or promiscuous; their condition can very often be attributed to sheer ignorance of the facts of reproduction.

Most young people have heard of the venereal diseases, but are quite unaware of the signs and symptoms, or how and where treatment can be obtained. Considering the serious consequences of untreated V.D., this ignorance is lamentable.

Sex education is concerned not only with the physical aspect of human reproduction. It must include some instruction on the human

relations aspect, and should give positive guidance on how to handle the instinctual sex drives which reach the conciousness of young people at puberty and afterwards. In discussions with teenagers, it is found that they are just as concerned with the emotional problems involved in their relationships with the opposite sex, as with the physical side. And it has been found that many adolescents desperately need a sympathetic adult other than their parents, to whom they can turn in times of stress.

Education in healthy living

Modern medicine is aware of many hazards that threaten the health of human beings. Education in healthy living should seek to outline some of these hazards, and give suggestions on how they might be avoided. The most important topics which might be included in health education in schools are:

(*a*) *Nutrition*—In the affluent societies of western countries, over-nutrition is likely to be as dangerous as under-nutrition. The school lunch is a valuable means of instruction in choosing a balanced diet, and children should be clearly warned that fatness is not compatible with fitness.

(*b*) *Road Accidents*—Over 130 child cyclists lose their lives each year; the risk being greatest with boys aged 10-14 years. Over 400 child pedestrians lose their lives, with boys under 9 years of age suffering the greatest mortality. More children die each year from accidents than from all the respiratory and infectious diseases together. Accidents at home and on the roads kill about 1,400 children under 15 years of age every year. All these deaths are preventable.

For males, death rates due to road accidents at ages 15-24 are 31.1 per 100,000, compared with 8.2 at ages 5-14, and 14.8 at ages 25-44[6]. The female death rate on the roads is approximately one sixth of that of males in early adult life. This is a fair commentary on the dangers of riding motor-cycles and scooters, and driving cars.

(*c*) *Food hygiene and personal hygiene*—The number of food poisoning cases is increasing annually. 7,846 food poisoning incidents were reported in 1959,—546 more than in 1958, and 775 more than in 1957. It is calculated that at least 17,500 people were affected, and 27 died. The Chief Medical Officer of the Ministry of Health states that "effective measures for the reduction of food poisoning have yet to be taken". Personal hygiene, which includes the washing of hands after using the toilet, has a direct influence on the incidence of food poisoning. Girls need instruction in housecraft and cooking, and

should learn that reheated meat, stews and pies are particularly hazardous, as are dishes made with eggs.

(*d*) *Air pollution*—Britain has the highest incidence in the world of chronic bronchitis, and this can be attributed largely to the gross pollution of the atmosphere with domestic and industrial smoke. The coal-fire at home contributes most of the pollution. If future generations are to be free of this crippling disease, the presentday schoolchild should be educated in the use of smokeless fuels and other methods of heating. Air pollution has been shown to be one factor in the increasing incidence of lung cancer.

(*e*) *Immunisation*—Diphtheria, tuberculosis, smallpox, poliomyelitis, and tetanus can all be prevented by immunisation. But not all parents and children make use of the immunisation schemes. Outbreaks of diphtheria still occur at the present day, and deaths from this disease in a modern society can only be described as scandalous. Children should be informed that immunisation is safe, effective and painless, and be encouraged to make use of the facilities of public health departments.

(*f*) *Dental health*—Only about five per cent of all children aged 12 have a perfect set of teeth. 45 per cent more children aged 12 were found to have decayed teeth in 1958 compared with 1953. The school tuck shop has been the object of considerable criticism, for between-meal snacks of glutinous sweets is thought to be one reason for the increase. Tooth decay in children could be reduced by half by the simple measure of adding fluoride to the common water supply in controlled amounts. School children should perhaps be educated to accept the wisdom of a policy of artificial fluoridation.

* * *

Healthy habits and a sound knowledge of modern health hazards are as important to any citizen as a knowledge of history and geometry. Teachers very often do not have the necessary knowledge to embark on programmes of health education, and doctors and nurses who have the knowledge are unfamiliar with and untrained in teaching techniques.

But some sort of alliance between the two disciplines is possible, and, indeed, has been shown to be profitable in such areas as Leeds, where mothercraft has been taught in schools by selected health visitors since 1930. In 1958, as an experiment, one was employed whole-time in a large secondary modern school for girls, and the

headmistress and teaching staff were of the opinion that the experiment was highly successful. In very many other cities there are increasing demands from schools for health visitors and medical officers to help with the teaching of personal hygiene, human biology, parentcraft and dental hygiene. Much can also be done in advising individual adolescent boys and girls on their personal problems.

Many biology and physical training teachers are aware of the need for elementary education in health, and undertake this responsibility with great success. But most of them think that more instruction in this topic could be given at teachers' training colleges. Again, the difficulties of over-crowded curricula are manifest. If the need for health education is recognised, then it must be possible to give student teachers some grounding in the subject at the training colleges.

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NEW ZEALAND PARENT CENTRES*

By BEVERLEY MORRIS

The New Zealand Parent Centre arose out of the discussions of a group of parents led by Mrs. Helen Bren, who in 1952 considered that, though the New Zealand maternity services were excellent in many respects, not enough care was being taken of the mother's emotional needs during her pregnancy and confinement. Inspired by overseas literature from authoritative sources such as the London University College Hospital, Yale University School of Medicine, the New York Maternity Center, W.H.O., and the Canadian Mothercraft Society, the group set up a panel of medical, educational and other specialists and began classes in the Y.W.C.A. building in Wellington. The Nursery Play Centre Association assisted in the organisation of a play centre for the toddlers, the Regional Council of Adult Education sponsored the lecture series, the Plunket Society lent their ante-natal sister for mothercraft instruction, and the Department of Health authorised the employment of a registered physiotherapist. Teamwork has been the keynote of the classes.

The Parents Centre idea spread to other cities and town until now in 1961, there are 12 branches linked by a Federation which meets regularly to formulate policy. On 14th December, 1960, the B.M.A. Council received the report of its sub-committee recommending that Parent Centres be re-instated ethically. At their meeting on 15th June, 1961, the B.M.A. approved this recommendation.

In each centre, there are held comprehensive classes for expectant parents where specialists combine to give a programme of lectures, relaxation exercises, film evenings, etc. The classes are designed to complement the mother's regular visits to the doctor, to prevent

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much unnecessary suffering by dispelling fear through knowledge, and reducing tension through relaxation. They are of real value irrespective of the doctor's approach, for a trained mother is likely to be a calm, co-operative patient.

When a mother enrols, bringing with her a written prescription from her doctor, she usually pays £2 2s. 0d. for the 12-week course, and she is given some useful booklets. She is introduced to other mothers, has a cup of tea and looks over the library of pamphlets and books. During the classes she becomes acquainted with the Birth Atlas and Grantly Dick-Read's recording of the birth of a child, and participates in the informal discussions in a friendly atmosphere.

The lecture series includes talks on conception, pregnancy, the three stages of labour and delivery and the use of analgesics and anæsthetics. In the "labour rehearsal" and teaching of controlled breathing and relaxation, the instruction is related to the actual labour situation. The whole approach lays great stress on the care of the mother as a person and on her total psychological well-being. Case histories from class mothers bear out the success of this training for childbirth.

Husbands are included in this training for parenthood, attending film and discussion evenings and learning their role in supporting their wives in the first stages of labour. Many hospitals now welcome fathers who come to sit and help.

The Parent Centre also publishes a regular "Bulletin" with a wide circulation and runs an information service for country mothers. There are many requests for midwives for home confinements but there is an acute shortage.

In the last ten years, Parent Centres have found themselves interested in other matters pertaining to maternity services, such as the provision of "rooming-in", the hospitalisation of children under five and the need for the mother to live in with the child or be permitted to visit frequently, the encouragement of breast-feeding, and also in a controversial part of nurse training. They have felt their aims to be allied to those of Mental Health Associations.

The New Zealand Federation of Parent Centres is now being recognised as representing an important section of public opinion on matters affecting family welfare and preventive mental health.

THE HEALTH SERVICES OF SCANDINAVIA

By J. S. COOKSON, M.D., D.P.H.,
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DURING March and April, 1961, I visited Denmark, Finland, Iceland, Norway and Sweden to study the health services of the Scandinavian countries. My itinerary was drawn up by the European Regional Office of the World Health Organization and by the medical administrators of the countries concerned. I found it to be most helpful previously to have been concerned in the drafting of synopses of the health services of these countries, which synopses were primarily based on the World Health Situation Reports of 1955. I have welcomed seeing in practice those services of which previously I had a theoretical knowledge.

The statements made in this memorandum and the opinions expressed are not necessarily those of the World Health Organization.

Background information

In order to assess the size and type of the problems which face the health administrations of the countries concerned I have set out the more important vital statistics in Appendix 'A'—these were supplied by the Epidemiology and Health Statistics Section of the European Regional Office.

In Denmark the relationship of the health services to social welfare is close. Active membership of a social insurance society is restricted to persons with incomes not exceeding that of a fully employed skilled worker. Other persons may join special non-subsidised health insurance societies. The two types of health insurance together cover 85 per cent of the adult population. The social insurance societies provide free hospital services for all their

members ; provide free medical attention ; defray three-fourths of the cost of medicaments on an approved list ; and pay monetary benefits at regular periods for limited duration.

In Finland, only a very small proportion of persons have taken advantage of the voluntary insurance scheme. Patients are required to pay 20% of the cost of maintenance in the hospitals, which are the responsibility of the State or of the local authorities. However, consideration is now being given to the possibility of having a national health insurance scheme which would be comprehensive.

In Iceland, a national health insurance scheme was introduced in 1946. This provides services for the prevention of illness and medical care of sick persons.

In Norway, there is a compulsory national health insurance scheme. Hospital care is free at all public hospitals, and if the patient prefers to go to a private hospital instead, then he receives a contribution towards this and pays roughly the difference. Medical care either by a general medical practitioner or by a specialist is also covered, but the patient is required to pay about a quarter of the cost.

In Sweden, there is a compulsory health insurance scheme which covers virtually the whole of the population. However, here also the patient is responsible for about a quarter of the cost of the doctor's fees, except where he is on relief ; but in hospital the cost is fully met up to a period of two years.

Administration

Generally speaking the system of central administration for the health services is similar in all the Scandinavian countries.

In Denmark, the arrangements are that the National Health Service, a non-governmental central organisation, is responsible to the Ministry of Interior for the administration of the health services. This organisation advises and supervises the various health functions of all government departments and also of local authorities. It is also responsible for the supervision of hospitals, laboratories, and for the production and control of drugs, vaccines and sera. The head of the National Health Service is the Director-General. On his staff he has a general medical practitioner, a dentist, a legal adviser, a hospital administrator, a toxicologist and other expert advisers. The executive work locally is carried out by 22 county and 67 district medical officers, appointed by the State, with the exception of the City Medical Officer of Copenhagen.

In Finland, the State Medical Board is responsible to the Ministry

of the Interior. The State Medical Board has general powers of supervision and control of the health services. It has a Director-General at its head. In Helsinki, the Medical Officer of Health and his staff are responsible for the environmental and personal health services. However, in most of the country the population is dispersed, living in small towns or communes. Roughly speaking, there is a communal physician for every 4,000 to 10,000 population. The appointment actually is made by the commune but is subject to approval of the State Medical Board, which is almost always given. The communal physician is responsible for public health, hospital and general practice in his area. For general medical care the patients pay him fees directly on a private basis. In cases of extreme hardship the fees are met by the commune. There are 11 provincial health officers who, on behalf of the State Medical Board, supervise the work of the communal physicians. Such supervision includes his work in hospital, general practice and public health. The provincial health officer has a staff including a provincial nursing officer and often a provincial public health inspector to deal with such branches of the work. The local board of health is responsible for the personal and environmental health services and acts through the communal physician who ex-officio is a member of the board.

In Iceland, administration at the national level, to my mind rather surprisingly, is the responsibility of the Ministry of Justice. On health matters the Ministry is advised by the Director-General of Public Health. Local authorities are primarily responsible for the general hospitals, and the State for special hospitals, However, in Reykjavik the State Hospital—a general hospital—is run by the State, but this hospital is run in connection with the university and is a teaching hospital for medical students, nurses and midwives. The local authorities are responsible for environmental sanitation, supervision being carried out by local public health committees, of which the district medical officers often are members.

In Norway, the Ministry of Social Affairs has the overall responsibility for the health services. Executive action is taken by the Directorate of Health Services, with a medical administrator at its head. Some 80% of hospital beds are maintained by the various authorities: national government, provincial governments or local authorities. Although there is no law which stipulates which precise authority shall be responsible for which particular type of hospital, by long standing tradition the national government assumes all or part of the financial responsibility for hospitals for tuberculosis and

mental disease, and for the university hospitals ; the provincial governments are responsible for the larger general hospitals ; and the local authorities for the smaller ones. The remaining 20% of the hospital beds are maintained by various voluntary organisations. Emphasis is on local responsibility and use of voluntary bodies.

In Sweden, the Ministry of the Interior is responsible for the health services and the Ministry of Social Affairs for housing, social insurance and other social services. Most of the medical matters are dealt with either directly or indirectly by the Royal Medical Board, which has a medical administrator at its head.

Organisation of medical care

In Denmark, health insurance societies insure their members for medical care, and this covers rather more than 80% of the population. The societies have contracted with general practitioners to provide such care. Fees are arrived at by negotiation between the insurance societies and the professional associations. The hospital charges which the councils can make require the approval of the Ministry of the Interior ; the charges are met by the health insurance societies. But even for patients outside the insurance societies the charge made is only about 20% of the actual cost of maintenance.

In Finland, there is a comprehensive hospital service. For the most part the hospitals are provided by the local boards of health, although some are provided by the State Medical Board. Plans are now afoot to bring the hospitals into a small number of regions not necessarily co-terminous with the boundaries of the provinces, but so arranged that each region will have sufficient beds to justify a degree of specialisation to provide all types of specialist care for patients coming from its catchment area. Patients are charged a fee per day for hospital maintenance and medical care. However, this fee is low and represents rather less than a quarter of the actual cost ; in cases of real hardship the fee is met by the commune. At the general practitioner level there simply is not an equivalent of the family doctor, as known in the United Kingdom. In the towns such care is given by private medical practitioners, many of whom carry on part-time specialities. In the rural areas there are insufficient numbers of potential patients to justify a doctor setting up in general practice. Communal physicians are appointed and have multifarious duties, including general practice. The patient pays the communal physician for general medical care, on a private basis.

In Iceland, the great majority of hospitals are publicly owned and operated, and available to the population at low fees. However, most people are covered by the national health insurance scheme making hospital care free of charge. The country, except Reykjavik, is divided into 55 districts, served by a district medical officer, who has at least a dual responsibility, dealing with both public health and general practice in the area. At Akranes, with a population of 3,300, I was impressed to find that in addition to public health and general practice the district medical officer was also school medical officer and radiologist at the local hospital. At Hella, in addition to work of a routine nature, the district medical offier was carrying out epidemiological research on a condition known as "farmer's lung."

In Norway all hospital care is free. A medical practitioner may set up in practice where he likes, and he is paid by the health insurance scheme on a basis of fees for services rendered. In the remote rural areas some inducement is necessary, so the Directorate of Health Services pays public health doctors salaries for this branch of their work and also allows them to undertake general practice, for which they are paid as other doctors. I saw something of this with a public health doctor who covered an area near Oslo, including Lillestrøm and two neighbouring communes with a total population of 17,000. He also undertook additional work as a consultant dermatologist.

In Sweden, the Royal Medical Board is responsible for the organisation and supervision of all forms of medical care. Apart from a few large cities, which have their own hospitals, and with the exception of state mental hospitals and two hospitals in Stockholm, hospitals are the responsibility of the county councils. They are chiefly financed out of taxes raised by the councils. As a rule, each county has a central hospital with smaller outlying hospitals. There is a system of salaried district medical officers, employed by the State, in the rural parts. They are entitled, and indeed obliged, to treat all patients attending at their surgeries. Patients are charged fees by the district medical officers, but recover a proportion in the usual way.

Preventive health services

Some 80% of the urban population in Finland has a piped treated water supply, but only 8% of the rural population. Where there are such supplies then there are sewerage schemes. In the rural areas, there is still a real danger of contamination of water

supplies from privies. In 1960, there were 1,000 cases of enteric fever, of which quite a proportion were thought to be waterborne in origin.

In Iceland a piped water supply is available to 80% of the population. All the urban areas have sewerage schemes which discharge into the sea. Reykjavik has the good luck to have hot water for central heating and domestic purposes from naturally occurring volcanic springs. The policy regarding B.C.G. vaccination differs from other Scandinavian countries. Routine skin testing of children 7 to 13 years of age shows only 5% to be positive reactors. Vaccination of negative reactors is done only in the case of immediate contacts of known cases, students going abroad or children whose parents especially wish it to be done. In fact, routine skin testing of children is used as an epidemiological diagnostic procedure—that is to say, if several positive reactors occur, then a start is made to find the source of infection. Exactly the opposite line is taken in Finland, where the objective is to have a positive reactor population. Some 90% of new born babies have B.C.G. vaccination ; children shortly before going to school are skin tested and negative reactors vaccinated ; this is repeated on several occasions during school life and any negative reactors are vaccinated.

In Sweden the district medical officers have certain duties in the personal health field, such as maternal and child welfare and school health. They also act as medical officers in charge of the environmental health services under the supervision of the provincial health officer. But in view of the shortage of general medical practitioners in the rural areas, their main work really is giving general medical care to the population. On an average, they are responsible for a population of about 4,000, but some have larger districts.

The district medical officers in Denmark are in charge of the public health work locally. I was privileged to see something of the environmental health problems created by unauthorised " shack " building on the outskirts of Copenhagen in the area of Tarnby. These buildings were inhabited by a high proportion of problem families.

Rehabilitation

I found that in all countries considerable thought was being given to the rehabilitation of disabled persons, whether the disability was due to natural causes or to an accident.

In Finland I visited the Institution of Occupational Health at Helsinki which, under Professor Leo Noro, has done so much to develop the occupational health services in that country. This Institution is most comprehensive and appears to be doing excellent work. The function of the Institution is to assess the disability and then work out a detailed programme of rehabilitation. This means that each patient referred to the Institution has a routine medical examination, with psychological aptitude tests, and a report is prepared on his home circumstances. Plans are then made for the rehabilitation of the individual patient. whether it be by medical care, training, or welfare—often by all three.

At Reykjavik I was interested to see Mulalundur rehabilitation centre. It has accommodation for 50 adults suffering from quiescent tuberculosis, heart disease or some active physical handicap. The workers do a four hour day and are paid nationally agreed rates of pay. The centre was originally established with funds raised in a lottery, and it is now subsidised by the central government. At the Reykjalundur rehabilitation centre, founded some 15 years ago for quiescent tubercular patients, about half of the total of 90 places was taken up by such patients and the remainder by patients suffering from a variety of conditions including mental diseases, bronchitis and asthma, and coronary thrombosis. It was not without significance that although the voluntary organisation had extended its terms of reference to include conditions other than tuberculosis, for general public relations and fund raising purposes it was thought desirable not to alter the name by which it was already well known to the public.

In Sweden, at Jönköping, I saw a modern rehabilitation centre which covered the population of its own county and two neighbouring counties, some 750,000 people. There were 60 men and women between the ages of 17 and 55 in the centre. They suffered from a wide variety of handicaps and after six months training the objective was that they should be placed elsewhere. At Tranas I saw a large hospital of 200 beds with a well developed rehabilitation centre, mainly for persons suffering from rheumatoid arthritis.

In Norway, at Bergen, there is a rehabilitation unit being developed, in premises which many years ago were used for the care of persons suffering from leprosy, and in more recent times were used as accommodation for tuberculous persons. There are now 100 places in this unit, for 75 men and 25 women. Considerable emphasis is placed on the great value of a period for assessment and the planning of a personal programme of recovery for each patient.

Some aspects of staff training

It is quite impossible to deal with the detail of all forms of staff training, but I thought that it might be useful to make a note of some aspects which seemed to me to be new or very different from what I had known previously.

In Reykjavik the State Hospital has a nursing training school. The nursing training school is administered separately from the State Hospital. There is a management committee of five, (the Director-General of Health, the matron of the State Hospital, a representative of the education department, a doctor and a nurse). The work is the executive responsibility of the director of the nursing training school, who is a senior nursing administrator. The general training is varied and includes ten weeks preliminary work, two years at the State Hospital, three months at the State Mental Hospital, two months at a tuberculosis sanatorium and six months at a provincial general hospital. There is no public health training course in Iceland.

In Finland, nursing training is the responsibility of the State Medical Board. Students actually pay for their cost of maintenance, relying either on their parents or the education authorities. In spite of this there are four applicants for each vacancy. Here also the nursing training school is administered separately from the nursing duties of the hospital. Basic training lasts for two and a half years. Then, after the nurse has practised for one year, she may go on to further training. Some 10% of them do public health nursing, 15% become ward sisters, 5% do midwifery and rather less than 1% medico-social work. In addition to this there are advanced training courses for senior nursing administrators. I found the Uusimaa Provincial Health Office and attached Training Field of special interest. The Public Health Teaching Field covers a population of 400,000. The staff includes a doctor, two public health nursing supervisors and a supervisor of midwives. It is used for nurses at various stages of their careers.

In Sweden there are 27 nursing training schools giving general training which seems to be similar to that in Finland, except that it is possible for a nursing student to specialise in the last year of her general training with the opportunity of taking up one of several specialities, e.g. psychiatric nursing at Uppsala.

Special features

Alcoholism is something of a problem in all countries but in several of the Scandinavian countries it is treated as a separate and

special problem. In Sweden considerable help is given by the Temperance Boards ; indeed, there is a Temperance Board in every commune. A considerable number of beds are set aside for the care of alcoholics in different parts of the country. I visited the Maria Alkoholpoliklinik, which has 7 beds for acute cases and 30 beds in a nearby hospital for cases requiring longer standing treatment. The out-patients department had 4,000 patients last year making a total of 45,000 attendances. Patients for the most part are referred by the Temperance Boards, some others come along on their own, and some from the police ; the general practitioners refer only very few patients. The premises are situated in the working class part of Stockholm and are in an adapted part of an old hospital building. The staff consists of a psychiatrist with three assistants, a general physician, six nurses for general duties and several others for special duties, and two social workers. Treatment depends on the clinical type of case, the seven beds for acute cases can be occupied only up to a limit of 24 hours. Then alternative arrangements have to be made. Various methods of treatment may then be given either as an in-patient in the 30 bed unit or as an out-patient at the clinic. Such treatment includes general medical care, special drugs such as Antabuse, and psychiatric care with, in some cases, electro-convulsive therapy.

The rather exceptional social and economic conditions in Sweden have been a suitable background for an interesting experimental private clinic, the Läkerhuset at Vallingby, a modern and wealthy suburb of Stockholm. A group of doctors with borrowed capital, and helped by funds from the Swedish Medical Association, have established this ten-storey block. The practice consists mainly of out-patients, with some six in-patient beds. Patients pay privately and recover from half to three-quarters of the cost from the national insurance scheme. Altogether there are ten doctors and four dentists in practice in the clinic. Of the doctors, two deal with general practice and the remainder with their own specialities only. An attractive feature is that each doctor has his own suite including, in some cases, his own living accommodation, surgery, waiting room and facilities according to his speciality. There are a number of nurses and other ancillary staff, who also have residential accommodation on the premises.

For many years past arrangements have been made for the family care of mental patients from the Ulleräkers Hospital, Uppsala. Out of the hospital with 1,200 patients an additional 300,

consisting of equal numbers of men and women, are placed in the surrounding community. I was privileged to visit many such patients at Rasbo (mainly men), and at Alsike (mainly women). A special staff is used for placement and supervision. This consists of two medical officers, three nurses who have additional mental hospital training, and two social workers. Clinically the patients were mainly psychotics and they had already undergone a course of hospital treatment. Some families for several generations have been accepting patients from the mental hospital, although it was considered unusual for a particular mental patient to stay in one placement for longer than 5 years. The hospital paid the family £1—£4 per week, depending on the condition of the patient, and the family paid the patient about 15/- per week in pocket money. Some of the placements made were single ones, but I also saw several houses where the family kept as many as 15 patients. The degree of supervision is close. A nurse visits weekly and the doctor monthly. Any deterioration in the physical or mental condition of the patient is noted and where necessary the patient is returned to hospital or perhaps more frequently to a different placement. These patients, for a variety of reasons, are unable to return to their own homes. Clearly this family care of mental patients from the mental hospital is a success.

Comments

Without a very considerable amount of preliminary preparation, which was made possible to me by being concerned in writing the synopses based on the World Health Situation Reports, I can see that my two months tour of Scandinavia could quite easily have degenerated into a series of lightning visits, shaking a thousand hands, holding a whirlwind of talks and coming away with mental indigestion of the impressions gained. At such a pace it is not easy to penetrate the courteous facade of formality, but I was indeed fortunate that my contacts in each of the countries not only arranged visits but also gave me the opportunity of informal conversations with my opposite numbers ; these I found to be of the greatest possible value.

So far as the background is concerned, there is a certain similarity of problems. Each of these countries consists of a relatively small population dispersed over vast rural areas, frequently with a high proportion of the total living in one or two large cities. Each has a similar background of social and health problems arising after centuries of interwoven history and ancient traditions.

In these circumstances it is not altogether surprising that they have similar organisation of their health services and similar administration for executive action within a broadly similar framework of organisation. All the countries have some form of national health insurance scheme. This ranges from more or less compulsory comprehensive provision in Sweden to a voluntary form in Finland, which at the present time covers only a small proportion of the population. However, even where the national health insurance scheme is looked upon as being comprehensive, in that it includes most of the population, it does not extend to paying the total fees of the general practitioner. The patient is left to pay the difference between the doctor's charge and the re-imbursement received from the insurance scheme. Again, for hospital cases there are differences ; in Sweden, at any rate for two years, the insurance meets the cost ; in Finland the patients must pay a part. However, in all instances the cost of care in hospital is borne for the most part by the providing authority, and rather less than a quarter is left to be paid by the insurance scheme or the patient.

The administrations are similar. The central government department responsible to the national government for the health services is the Ministry of Social Affairs or of the Interior, except in Iceland where it is the Ministry of Justice. These central government departments have delegated much of their power to central non-governmental bodies with similar functions and limitations. This body is known as the National Health Service in Denmark, the State Medical Board in Finland, the Health Directorate in Norway and the Royal Medical Board in Sweden. The body advises all central government departments on health matters, which must go a long way towards co-ordinating the various central government departments. The administration is carried out in three tiers. In addition to the general advice on policy matters, the central body is responsible for the administration of some work which, by nature of its size and other considerations, is best organised on a national basis ; these include research institutions, mental hospitals and international relationships. The provincial administration is a regional representation of central government. Its work is to supervise the services provided by the central administration and to advise local authorities. In Sweden the areas of the provinces are co-terminous with the areas of the counties. The provincial health officer, as the officer of the central government, advises the county councils. All districts have a local

board of health which is responsible for public health work at the level of the communes.

The organisation of medical care follows a fairly uniform pattern. Almost all the hospitals are publicly owned. The central non-governmental body has the general responsibility for advice and supervision of hospitals. Generally speaking the State or the non-governmental body provides the mental hospitals and those hospitals associated with the teaching of medical students. The province, that is the intermediate stage in the three tiers of organisation, provides the larger provincial general hospitals, and the local boards of health provide the smaller general hospitals. With the outstanding exception of Denmark, the "family doctor" as the term is understood in the United Kingdom does not exist in the Scandinavian countries. Patients by tradition simply have not become accustomed to the idea of being attached to one general practitioner, to the exclusion of others. In most of the countries there is a national health insurance scheme on which the patient claims a substantial part of the fee he has paid to the general practitioner. Because of the great difficulty in distribution of doctors it is necessary in all five Scandinavian countries to have a scheme of salaried district medical officers in the rural areas. They are required to treat all patients attending their surgeries. Patients are charged fees by the district medical officers, which they recover in the usual way. There can be no question of having a family doctor in such areas, since there is only one doctor.

Preventive health services are administered by the appropriate local government unit. The services include the supervision of environmental sanitation, food control, prevention and treatment of infectious diseases, tuberculosis, venereal diseases, maternity and child welfare and school health services. Environmental sanitation is still a matter of paramount importance in most countries. Urbanisation following on industrialisation has made it of the utmost urgency to have a sound water supply and an effective sewage disposal system.

The reduction in tuberculosis mortality, and more recently in tuberculosis morbidity, has brought along a number of interesting questions. Iceland take the line that the objective should be to have a tuberculosis negative reactor population, whereas Finland take exactly the opposite point of view and are all out to have a positive reactor population. I feel that policies implying the injection of millions of children each year must come up for review from time

to time. Perhaps there is a particular stage in the reduction of the tuberculosis mortality and tuberculosis morbidity at which a country should switch from the objective of having a tuberculosis positive reactor population to the objective of having a tuberculosis negative reactor population. If this is so, at what stage ?

Rehabilitation is being tackled in all countries with considerable vigour. Some countries have decided to treat it as a relatively new development of medicine, and to build and equip institutions from a completely new start, with staff specially trained and experienced in the work. Other countries have taken advantage of the reduction of accommodation required by quiescent tuberculosis patients for rehabilitation or resettlement, and have gradually filled up vacancies with persons suffering from a variety of medical conditions. There are quite considerable benefits in continuing such rehabilitation units. Staff are already used to the long term care of chronic patients, with all the psychological problems involved, and from an economic point of view the units are able to continue with their existing contracts for the disposal of goods. It would appear that there are pros and cons for establishing a new rehabilitation unit, just as there are for making use of existing provision. Best, perhaps, would be a new unit for assessment and for the laying down of a programme of recovery for the individual patient, and then modification of an existing unit to carry out a particular type of rehabilitation.

All countries are satisfied that the efficiency of their health services is dependent upon an adequate number and high calibre of nursing recruits. Courses are now being separated from the executive administration of nursing care in the hospitals. Rightly or wrongly the nurse recruit is now becoming a nursing student, with all that this implies in set hours of study, varying types of training and payment of cost of maintenance by the nurse herself. An immediate repercussion has been the need to train nursing attendants who, with rather less than 12 months training, are now carrying out a substantial part of routine nursing in hospitals to which a nursing training school is affiliated. This change in the pattern of nursing training should be watched with very great interest.

I was particularly impressed with the potential possibilities of the Uusimaa Public Health Training Field. Here the population of 400,000, although reasonably accessible from Helsinki, is nevertheless typical of the sort of conditions that a public health nurse

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I was particularly impressed with the potential possibilities of the Uusimaa Public Health Training Field. Here the population of 400,000, although reasonably accessible from Helsinki, is nevertheless typical of the sort of conditions that a public health nurse

is likely to meet in the more remote rural areas of any of the Scandinavian countries. The very great enthusiasm of the teachers should go a long way to giving the nurse the right spirit for carrying out her own duties, when eventually she takes up her appointment as a public health nurse.

Conclusion

1. The first conclusion must be that study of the organisation and administration of the health services of the Scandinavian countries is very well worth-while, not only to members of other Scandinavian countries themselves, but also to persons from the United Kingdom.

2. All the Scandinavian countries have a similar background of history, tradition and development of their health services. All have some form of health insurance. In some countries this covers most of the population, in others (notably in Finland), only a small proportion of persons are so covered. Generally speaking the hospital service is free or only a small charge is made. The general medical practitioner has to be paid a fee by the patient, who is then reimbursed a varying proportion by the insurance scheme.

3. With the exception of Iceland, the central government departments do not take executive responsibility for running the health services but act through central non-governmental organisations known as the National Health Service in Denmark, the State Medical Board in Finland, the Health Directorate in Norway and the Royal Medical Board in Sweden. Where there is a provincial health officer then he acts as the representative of delegated central authority.

4. The organisation of medical care shows considerable difference from that of the United Kingdom. I think that the underlying cause of this is that the family doctor system as understood in the United Kingdom simply does not exist in the Scandinavian countries, with the exception of Denmark. Patients have never been accustomed to the tradition of being attached to one doctor to the exclusion of all others. In turn this has far reaching influences not only on the doctor-patient relationship, but also on the way public health work fits into the general medical scheme of things, and on the relationship of medical officers of health with other doctors.

5. The health services of the Scandinavian countries are similar to each other but show marked differences from those of the United

Kingdom. We certainly have something to learn from them, but always bearing in mind that what is suitable for them is not necessarily ideal for the United Kingdom.

I am grateful to the Ministry of Health for nominating me for the Travelling Fellowship, and to the European Regional Office of the World Health Organization for the excellent arrangements made with the administrators of the countries concerned, and especially to Sir Andrew Davidson, former Chief Medical Officer of Scotland, who has been helpful in so many ways.

APPENDIX A—Vital Statistics

(Figures obtained from Demographic Yearbook 1960)

Country	Year	Population in thousands	Crude death rate per thousand population	Infant mortality rate per thousand live births	Birth rate per thousand population
DENMARK [1]	1956	4·466	8·9	24·9	17·2
	1957	4·488	9·3	23·4	16·8
	1958	4·515	9·2*	.....	16·6*
FINLAND	1956	4·291	9·0	25·4	20·7
	1957	4·336	9·4	27·9	20·1
	1958	4·376	8·9	24·5	18·5
ICELAND	1956	161	7·2	17·3*	28·3*
	1957	165	7·0	16·9*	28·7*
	1958	169	6·9	18·8*	27·4*
NORWAY	1956	3·462	8·7	21·2	18·5
	1957	3·494	8·7	20·5	18·0
	1958	3·526*	8·9*	.....	18·1
SWEDEN	1956	7·316	9·6	17·3	14·8
	1957	7·367	9·9	17·8	14·5
	1958	7·415	9·6*	15·8*	14·2*

1) Excluding Greenland and Faeroe Islands.
* Provisional.
... Data not available.

HAMMERSMITH HEALTH INFORMATION BUREAU AND HEALTH SERVICES GUIDE

With the advent of social services as we now know them, the health services have become so extensive and involved that it is increasingly necessary to give guidance to the public on the facilities available and the best means of obtaining them.

It was primarily for this reason that the Hammersmith Borough Council, through its Health Committee, considered it would be performing a public service by making available to its citizens a comprehensive guide to the health services, covering all aspects of personal and environmental health, and at the same time setting up, as part of the Public Health Department, a Health Information Bureau.

Consequently, in January 1954, the Bureau was opened at the Hammersmith Town Hall. The opening was broadcast by the B.B.C., who interviewed the Chairman of the Health Committee, the Medical Officer of Health and members of the public who happened to be making enquiries at the time. The Bureau, in addition to dealing with enquiries which are the direct concern of the Health Department, has accumulated information on all aspects of the national and local health services and acts as a guide and mentor to the often bewildered enquirer. It is manned by the Health Department as part of the normal work of the staff. In the first year of opening the Bureau dealt with over 4,000 enquiries, and in the last few years the number has risen to well over 5,000 each year.

The Health Information Guide, which was first published as a corollary to the Bureau in 1954, allows the Borough Council to extend its Information Service to all the local doctors, chemists, opticians, etc., and to hospitals and other health centres. The Guide is reprinted and brought up to date each year, and one of the improvements recently introduced is a map of the Borough together with plans of the major housing estates and blocks of flats, showing the entrances and other information. These plans are extremely useful to local doctors, health visitors and others concerned with visiting. Some 2,500 copies of the Guide are issued each year, and its circulation has now become international, with copies being requested from all parts of the world.

The Bureau has been a most successful undertaking and the public is very appreciative of the service, which is available to any applicant, whether a resident of the Borough or not.

THE ARTIFICIAL KIDNEY

By A. R. HARRISON, M.D., M.R.C.P.

In order to explain how the artificial kidney works and its use in clinical practice it is necessary to give a brief outline of normal renal function and to describe how this may be affected in certain diseases.

Renal function

In health the volume and chemical composition of the extra-cellular body fluids, i.e. the blood plasma and the fluid which bathes the tissues, remain virtually constant because of the ability of the kidneys to vary the volume and the chemical composition of the urine they elaborate from blood plasma. Substances such as urea, which are produced during the metabolism of protein foods or from tissue breakdown, are excreted by the kidneys in amounts corresponding to the amounts formed. These are waste products, for they play no further part in metabolic processes, whereas other substances such as potassium, which enters the extra-cellular fluids either from the food or from the breakdown of tissues, may be needed for the building of new cells. In consequence the kidney excretes only the amount of potassium which is surplus to the body's requirements. A similar situation exists in respect of water and salt, though here the variations in urinary output are largely determined by the amounts ingested and lost in the sweat. Finally, by means of a complex process the kidneys are able to eliminate acids and so play an important part in the regulation of normal acid-base balance.

Acute Renal Failure

Let us consider what will happen when all these renal activities cease and no urine is formed. Urea and other end-products of protein metabolism will accumulate in the body fluids, and this will

occur even if no protein foods are eaten, for the breakdown of the body's own tissue protein will continue. Some of these end-products are toxic and their retention causes uræmia and, finally, the death of the patient. Other substances liberated during tissue breakdown, notably potassium, are also toxic if the plasma level reaches a certain concentration. Finally, water balance must be considered. Each day the insensible water loss from the skin and the breath is about 1 litre, whereas the water produced by metabolic processes is only about 400—500 ml. Should, therefore, the daily ingestion of water exceed 500—600 ml. then the body water content will rise and pulmonary œdema may follow.

Acute renal failure with either partial or complete cessation of urine formation may be caused by a wide variety of diseases and injuries. Amongst these are surgical shock, hæmorrhage, mismatched blood transfusion, poisoning by chemicals such as carbon tetrachloride, and acute nephritis. In the majority of such cases the renal damage is only temporary, or to use the modern jargon, "reversible", and after a period which may vary from a few days to as long as 3-4 weeks kidney function will recover naturally. This is not to say that all patients with acute reversible renal failure survive; their survival depends on whether or not renal function returns before the chemical disturbances of the body fluids reach lethal proportions.

Treatment of acute renal failure

It is important to appreciate that nothing can be done to hasten the natural recovery of renal function; the whole aim of treatment is to prolong the patient's survival until renal function returns spontaneously. This requires measures which will delay or reverse the development of the body fluid disturbances which are the sole cause of death in uncomplicated renal failure.

In all cases conservative management is instituted. Briefly, this consists in avoiding the dangers of overhydration by the maintenance of exact water balance, the prohibition of all protein foods and, in an attempt to reduce the breakdown of the patient's own tissue proteins, the daily administration of at least 100g. of glucose. These measures will retard but will not prevent the development of chemical changes, and should the duration of renal failure be prolonged, or the rate of tissue breakdown be accelerated by trauma or surgical operation, conservative management may fail. It is in such cases that the artificial kidney is most commonly indicated, for by its use it is possible to reverse disturbances in the body fluids after they have taken place.

Working principle of the artificial kidney

Various materials, including commercial cellophane, act as dialysing membranes—that is to say, they allow the passage of water and substances with relatively small molecules but are impermeable by large molecules such as the plasma proteins and, of course, by the blood cells, bacteria and viruses. Most of the substances in plasma, including those normally excreted by the kidneys, will diffuse quite freely through a cellophane membrane. In most patterns of artificial kidney, blood is circulated through a long coil of cellophane tubing which is immersed in a watery solution, usually known as the "bath fluid". Diffusable substances will traverse the walls of the tubing in either direction depending on their relative concentrations in the blood and the bath fluid. Consider what will happen when blood with a high concentration of urea is dialysed against a bath fluid which contains no urea, has the same concentration of sodium chloride as the blood, but has a higher concentration of glucose. Urea will diffuse out of the blood, sodium chloride will not move in either direction and glucose will diffuse into the blood; all these processes occurring simultaneously. The blood cells and plasma proteins will be unaffected. In short, by dialysing the patient's blood against a bath fluid which has essentially the same chemical composition as normal plasma it is possible to extract toxic metabolic products without removing substances such as glucose and sodium chloride whose presence in the blood is essential to life.

In operation the ends of the cellophane coil are connected to two large blood vessels, usually an artery and a vein, and by means of a pump the patient's blood is circulated through the coil at a rate of 200—300 ml. per minute. Before the cellophane tubing is connected to the patient's circulation it must be primed with approximately 2 pints of donated blood of the correct group.

Effects of haemodialysis with the artificial kidney

The modern artificial kidney is an efficient apparatus, and even in cases of advanced uræmia a dialysis of 4-6 hours duration will effect a marked improvement in the chemical composition of the blood plasma, which is usually accompanied by evident improvement in the clinical state of the patient.

It will be obvious that should renal failure continue, the benefits of dialysis will be only temporary, but nevertheless the patient's life will have been prolonged and his chances of surviving until renal function recovers thereby improved. Indeed, by timely and, if necessary, repeated dialysis it is usually possible to prevent death

from uræmia in cases of acute reversible renal failure. However, the mortality from this disorder is still high, for many patients die of intercurrent infections, to which they are prone, or as a direct result of the disease or injury which initiated the renal failure.

Although operation of the artificial kidney is a formidable procedure it has proved to be reasonably safe. Hæmorrhage is the biggest danger, for during dialysis it is necessary to administer large doses of the anticoagulant heparin in order to prevent blood clotting in the apparatus.

Clinical uses of the artifical kidney

Whilst much the most important use of the artificial kidney is in the treatment of those cases of acute reversible renal failure who appear likely to die in spite of good conservative management, it has other uses. On occasion it is helpful in the management of patients with chronic impairment of renal function, for its use may enable such patients to be tided over a uræmic crisis provoked by intercurrent infection, injury or an essential surgical operation.

It may also be valuable in some cases of poisoning, for certain drugs and chemicals, including some of the barbiturate drugs, can be removed by dialysis.

In conclusion it must be stated that it is quite unjustifiable to use the artificial kidney in the management of patients who are dying because of permanent or irreversible renal failure. The improvement resulting from dialysis will only give rise to false hopes which are soon dashed when the patient again deteriorates within a few days.

SOCIAL SCIENCE ASPECTS OF FLUORIDATION

A Summary of Research

By WILLIAM A. GAMSON, Social Science Program,
Harvard School of Public Health.

THE current controversy over fluoridation of community water supplies has been viewed from many different angles by social science researchers. This summary will try to indicate what these angles are, what conclusions have been drawn, and where gaps remain in our knowledge of social and psychological aspects of fluoridation. Basically, there seem to be two approaches. In the first, one looks at the individual voter or leader and asks questions such as these : Why is this individual for or against fluoridation ? What particular attitudes does he have that affect his view ? Is there anything in his background that would make him take the stand that he does ? In the other, one looks at the community as a whole and the groups within it and asks how characteristics of the community and the process of community decision-making affect the outcome of a referendum. Does some particular community characteristic (wealth, size, etc.) have a bearing on the outcome of the fluoridation issue ? What strategies are successful and why ?

PSYCHOLOGICAL APPROACHES :
WHY PEOPLE VOTE FOR OR AGAINST FLUORIDATION

Social characteristics of voters

A good deal is now known about the social characteristics of people who vote for and against fluoridation. What originally seemed like a clear-cut relationship has on further study frequently appeared to be more complicated. Initial studies seemed to

indicate that pro-fluoridation voters were a younger, more highly educated group. In a study of Fairfield, California, Taylor, Munro, and Fuqua found that women, people between the ages of 21 and 30 and those with high education were inclined to favour fluoridation. Yet, there were qualifications to the general relationship between high social status and pro-fluoridation attitude. Surprisingly, white collar respondents were least favourable of all occupational groupings, and the least favourable age group was the 41 to 50 year category.

Simmel, who interviewed voters in two cities in the North Eastern U.S.A., found that people who oppose fluoridation tend to have lower incomes and jobs of lower occupational status, but he also found several qualifications necessary. The Mausners (1955) report that in their study of Northampton, Massachusetts, those opposing fluoridation tended to be older, without children under 12, in lower income brackets, and in middle or lower class occupations. Support for fluoridation came mainly from younger groups and those in professional, managerial, and other white collar occupations. A large proportion of anti-fluoridation voters failed to finish high school. Among high school and college graduates, the majority favoured fluoridation.

Gamson (1961) in a study of voters in Cambridge, Massachusetts, found complicated relationships between age and education, and attitude toward fluoridation. Those with less than eighth grade education, and those with college education were strongly for fluoridation. Those with medium education were less likely to be for fluoridation. This relationship persisted when the effects of age were controlled : for those over 50 years of age 74% with eighth grade education or less favoured fluoridation, but only 44% of those with high school (but no higher) education favoured it. These results suggest that sub-populations among both proponents and opponents of fluoridation must be differentiated.

General beliefs

Many studies have attempted to relate attitude toward fluoridation to other political and social attitudes. Thus, the Mausners (1955) label the anti-fluoridation attitude " anti-scientific." This is probably overly simple. Apparently, most opponents do not perceive the near-unanimity that exists among scientists on the benefits of fluoridating water supplies. Kirscht and Knutson, in their study of Berkeley, California, residents, found highly positive general attitudes toward science regardless of position on fluoridation.

However, opponents scored higher on an index of the *indirect* threat of science and put less value on science as compared with other values.

Several authors have hypothesised that pro-fluoridation voters are more " liberal " on other political and economic issues. Taylor, Munro, and Fuqua found some small differences in favourable attitudes toward school integration and foreign involvement. Plaut analysed precinct voting from the 1953 referendum in Cambridge, Massachusetts. He found that the seven precincts that voted for fluoridation also supported the " more liberal " position on such other issues as proportional representation. Mitchell, in a study of a New Zealand community, found some correlation between Labour Party voting in a mayoralty election and *opposition* to fluoridation. Many questions have failed to distinguish proponents and opponents, and party affiliation in the United States apparently has no consistent relationship to fluoridation attitudes.

Gamson (1961) concludes from interviews with Cambridge voters, following the 1959 referendum in that city, that " the correlates of fluoridation position are likely to be found at a less superficial level than that of overt ideology." He found no differences between proponents and opponents on attitude toward the steel strike, the 1956 presidential vote, and other items associated with a liberal or conservative political ideology. While none of these studies provides adequate measures of political liberalism, there is little in them to suggest that more sharply defined measurement would reveal more.

Since much anti-fluoridation literature has concerned itself with the intrusion of government into private realms and with violation of individual liberty and choice, it seems fruitful to ask if proponents and opponents can be distinguished by their concern with these issues. Gamson (1960) included questions both on governmental intervention in the health field and on individual liberty in contexts other than health and found that while no significant differences existed, opponents were, if anything, *less* likely to be concerned with these issues. Opponents were slightly more likely than proponents to agree with the statement that " the government ought to help people get doctors and hospital care at low cost." It is dangerous however, to generalise these results to other settings (for example, small suburban or country towns), without further testing.

Anti-fluoridation arguments are frequently imbedded in a more general ideological context. Davis hypothesises that opposition to fluoridation is part of a " strain toward naturalism " and will

accompany a variety of political beliefs more or less exemplified by the current forms of populism. Once again, there is little evidence from studies of voters on this point. Gamson (1960) and Simmel discuss the prevalence of this attitude in their respective samples and conclude that while it may be true that " naturalists " are generally opposed to fluoridation, they may only be an insignificant number among anti-fluoridation voters.

Voters and partisans

Many discussions of fluoridation have suffered from the failure to distinguish between active partisans and voting supporters of each side. Paul makes use of this distinction in his discussion of the typical pattern of persuasion. " Excited by the threat to personal freedom . . . . , leaders of the local opposition lay stress on the poison argument which proves effective with large segments of the public who are only mildly concerned about dental caries (and who may not be too much more concerned about the ideological issue)." Marmor, Bernard, and Ottenburg also show a good deal of sensitivity to the diversity of the opposition to fluoridation. The authors speak of a " broad spectrum of opposition with arguments ranging from highly rational and scientific ones to completely irrational and delusional ones ; from genuinely selfless considerations to deliberately power-seeking ones."

One experienced health educator (Schmidt, informal communication) has suggested that there are three types of convinced opponents:

1) those who are in the controversy for personal interest reasons, i.e., they desire notoriety, profit, political gain, etc. ;
2) those who oppose it on religious grounds (particularly Christian Scientists) ; and
3) those who oppose it as a violation of freedom of individual choice.

One might add to these, those who are sensitive to health threats for various personal reasons and sincerely believe the poison arguments. Besides these convinced opponents, there exists a group—probably much larger than all of the above combined—who vote against fluoridation because they are uncertain and confused by the cross-fire of claims and counter-claims. Wertheimer also distinguishes several groups in opposition.

While those who vote for fluoridation may be somewhat more homogeneous, some distinctions are also necessary here. A sizeable number of favourable voters have little understanding of

what they are favouring ; some have the definite misconception that fluoridation is a water purification process.

The necessity for making a distinction between routine voters and active partisans is indicated by differences found on certain characteristics. For example, in contrast to the results on Cambridge voters, Green (1958) finds very strong evidence of concern among anti-fluoridation partisans with the issue of individual rights. Each of the 22 anti-fluoridation leaders whom he interviewed raised this argument. Similarly, the observations of Davis about the naturalist syndrome, derived from the writings of partisans and probably valid for many of this group, do not seem relevant for distinguishing favourable and unfavourable voters.

Personality and other psychological differences

Marmor, Bernard, and Ottenburg have suggested that opposition to fluoridation might be connected with failures of ego integration. When an individual cannot cope with his world, he may regress to excessive concern with bodily control. Such irrational fears might be operating in many opponents and would help to explain why food faddists are so frequently found in opposition. Donnelly (see King *et al.*) also has suggested a few hypotheses along these lines. While such explanations may seem overly subtle for some opponents, it seems necessary to interpret anti-fluoridation concerns such as the fear of sterility, poisoning, ingesting foreign objects into the body, weakening of the will, and " chemical rape " as symbolic rather than literal fears.

Another line of attack has emphasised hostility to authority as a component in opposition to fluoridation. While this theme has several variants, the core of the argument is that opposition to fluoridation is an expression of hostility deriving from a sense of frustration with one's position in the social structure. Coleman suggests that lack of attachment to community organisations characterises many rank and file opponents. He suggests that fluoridation is often introduced by local administrations and offers citizens a chance to vent their frustrations against this source.

Green (1958) suggests that the partisan opponents whom he interviewed are frequently characterised by distrust of authority and a sense of low political efficacy. Furthermore, this conclusion, based on a study of partisans, is given three independent confirmations in studies of voters. Gamson (1961) emphasises feelings of helplessness. He found strong differences on agreement with such statements as " Public officials don't really care what people like

me think " and " Sometimes politics and government seem so complicated that a person like me can't really understand what's going on." When age, education, and income are controlled, opponents of fluoridation are still more likely to agree with these statements. Simmel, who interviewed voters in two communities, hypothesises that " opposition to fluoridation is likely to be concentrated in categories or people with a sense of deprivation," be it political or social. He also used questions aimed at measuring political efficacy and found that opponents were lower on this variable.

The independent confirmations and agreement on the importance of this general variable in both partisan and voter studies stand out against the more equivocal quality of other explanatory variables. This explanation helps to account for the apparent inconsistency of partisan opponents in linking the Aluminum Company of America and the American Medical Association with a Socialist conspiracy to increase the power of the state. In the minds of the helpless, large and powerful organisations, regardless of their official goals, have in common an interest in their own aggrandisement and an ability to control people. To distinguish between power which is used selfishly and that which is used for communal ends is a refinement for those with a greater stake in the Establishment. Green (1958) and Simmel both contain provocative discussions on this theme.

SOCIOLOGICAL APPROACHES : WHY FLUORIDATION IS PASSED OR DEFEATED

Case studies and the strategy of fluoridation campaigns

There are by now a great many descriptive accounts of fluoridation controversies. While frequently interesting and suggestive, they employ no standard set of observational dimensions. Comparisons become difficult when one author focuses on values (Burns), another on arguments used by opponents (Griffith (1956), Mausner (1957), Nisbet), while still another talks of tactics (Mitchell, Stephens, Taylor, Wertheimer). Many of these articles are written for an audience of practitioners rather than social scientists ; the " explanations " are sometimes contradictory and rarely of sufficient sociological sophistication to give them more than explanatory value.

Several of these studies discuss the consequence of various

strategies in fluoridation controversies. Increasingly, there is a recognition that *merely educational* campaigns are not enough ; proponents and opponents must use *political* campaigns if they hope to be successful (Holtzman). While there are still occasional echos of the naive assumption that opponents of fluoridation simply need more facts and education, fluoridation activists have become more and more aware of the political nature of the issue. Schmidt (1960) and Metzner reflect this awareness in their consciousness of the consequences of who leads the proponent group, the wisdom of debates, and other similar matters. There is, however, much disagreement among authors on what tactics should be used. For example, Schmidt (1960) points out that fluoridation is more likely to be accepted if no referendum is held, but Holtzman argues that " proponents can ill afford to fight attempts at bringing fluoridation to the people." Reading several of these accounts is likely to leave one feeling that tactical advice divorced from the particular community context will be of little help to those in other communities.

There have been several attempts to go beyond the simple, descriptive case study. Henderson informally observed 12 midwestern communities. Comparing four towns which passed fluoridation with eight that rejected it, he found four factors which seemed to be associated with favourable outcomes :

a) lack of public dissatisfaction with governmental services,
b) involvement of older community-accepted leaders,
c) attention to minority groups in the campaign, and
d) use of a sustained, conservative, informal, educational programme.

Sanders and Katz (1958), although not using the comparative method, offer more than simple description in their study of " Northford." Similarly, Green (1958) developed a conceptual framework before presenting the details of six communities in which data on fluoridation had been collected. By fitting description into a more general analysis, these authors transcend the "case study," and are more appropriately discussed below under studies of the community decision-making process.

Role studies of participants

Why individuals in particular positions act or fail to act in the course of a fluoridation controversy is one link in understanding the outcome. Ultimately, we need to predict who will take which action as well as the consequence of particular role incumbents performing given leadership functions.

Sanders (1959, 1960) discusses the results of a study in which dentists, physicians, and other role occupants were interviewed in ten Massachusetts communities which recently had had fluoridation controversies. While more dentists had participated in a private way, only one-third participated actively. Among physicians, one-third had nothing to do with the pro-fluoridation campaign. Other health professionals and relevant non-health role occupants were also interviewed.

Raulet studied two additional communities in Massachusetts while fluoridation campaigns were in progress. His analysis helps to explain some of Sanders' results by pin-pointing the dilemma faced by proponent-partisans. As in Sanders' communities, the proponent partisan group was made up almost exclusively of local physicians, dentists, and public health officials. As professionals, they were inclined to play the role of detached and objective experts. At the same time, they were put in the position of acting as partisan lobbyists on a political issue. The consequences of this role conflict have frequently been confusion and equivocation in the execution of pro-fluoridation strategy.

Some evidence exists that political leaders and city officials are under pressure to remain neutral during fluoridation controversies. Coleman, using one Massachusetts community as his model, assumed that local officials were generally the initiators and backers of fluoridation. Green (1958), Sanders (1959), Lefkowitz and Howe, and Paul, covering several communities, find a "hands off" reaction more typical. They suggest that the alignment on fluoridation is atypical; a political leader will find that his usual supporters are divided. Not wishing to offend his adherents for what he may consider an issue of lesser importance, the typical political leader will hedge or remain neutral. Yet in many fluoridation controversies, political leaders do become heavily involved and the conditions under which this occurs still need to be clearly elaborated.

Community decision-making process

A number of investigators have been interested in studying fluoridation as a step toward the development of a theory of community controversy. Coleman makes a noble attempt to draw some general conclusions from a variety of controversies involving several different issues. Unfortunately, his information on fluoridation is extremely sketchy and frequently inaccurate but this reflects more on the inadequacy of fluoridation studies at the time of his writing than on the author.

Similarly, Rossi uses fluoridation as a special case of community decision-making. He makes the plausible guess that fluoridation opposition is an expression of the malaise of older residents of communities experiencing rapid growth. However, Green and Briggs (1957) found in their statistical study of 53 Massachusetts communities that those favouring fluoridation were growing *more* rapidly than those which defeated it. These incorrect guesses should not blind one to the more important point of these monographs, i.e., fluoridation is more profitably viewed not as an idiosyncratic controversy but as part of the general community decision-making process.

Sanders (1958, 1959) has focussed most directly on process as opposed to structure in his attempt to develop an analysis of stages through which an issue passes in the course of decision-making. He discusses fluoridation in terms of strategy and action at the stages of initiation, preproposal, proposal, community action, decision and aftermath.

Lefkowitz and Howe discuss the adoption of fluoridation in the general context of the acceptance of technical medical discoveries. They point out that there are two types of such "programme-building." One is science-based and expert-centred while the other is community-based and consultant-centred. They suggest that some active proponents, in the search for specific *tactics* that would work, have lost sight of the type of broader strategic considerations which they discuss.

Green (1958) has attempted to develop a broad theoretical apparatus of particular relevance for the study of fluoridation controversy. He attempts to relate the social structure of the community (particularly through the concept of "cleavages"), to leadership structure and strategies in the fluoridation controversy.

Finally, Gamson (1961) in describing some impressions gained at the midpoint of a comparative study of community decisions on fluoridation and other issues in 15 to 20 New England towns, suggests a way in which the psychological and sociological approaches might be combined. If it is true that many who vote against fluoridation feel more politically helpless than those who favour it, then perhaps certain events in a fluoridation campaign make these feelings relevant. In particular, actions by health professionals which can be construed as "high-handed" or "arrogant" may feed such feelings and contribute to many defeats in referenda.

Judging from the number of articles written and being written,

social scientists continue to be fascinated by the many ramifications involved in the fluoridation issue. Health professionals and others who become actively involved in the controversy must be ready to excuse the zest with which their " uninvolved " colleagues in the social sciences study their sometimes painful experiences.

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BOOKS

MAN AND HIS BODY, by Benjamin F. Miller and Ruth Goode. (Victor Gollancz. 1961. Pp. 375. Price 21s.).

This book begins at the beginning, setting man in the evolutionary time-scale. It goes on to conception and individual inheritance, and is recent enough to be clear about twenty three pairs of chromosomes. The section on embryology is brief but well done. There follow surveys of the different systems.

This is an interesting and useful book that should be especially helpful to health educators. It is accurate and pleasantly written, and the few illustrations are effective and well-chosen. There is a full and careful index.

Only one criticism is possible. It is at different points obtrusively American. Not just in the spelling of "fibers", but in the authorities quoted and in the modern instances that concern, for example, baseball and disc jockeys. This one point apart, it is a book that can be confidently recommended.

HARVEY FLACK

ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION AND RECREATION FOR SCHOOLS, by Richard C. Havel and Emery W. Seymour. (The Ronald Press Company, New York. 1961. Pp. 440. Price $5.50).

This book stems from a social organisation different in its detail from ours and describes a different administration, yet it contains much of interest for school health service administrators. It begins with a statement that will gain ready acceptance on this side of the Atlantic—that administrative action should be recognised as a means to an end rather than an end unto itself. The authors point out the various ways in which American schools promote the health of their pupils, ways which are familiar to those in our own school health service.

The differing standards of education and competency required by the various States from their teachers of health, physical education and recreation are described. These standards appear very uneven, and potentially inhibitory to free interchange of jobs. The short paragraph on staff morale is excellent and includes the point only overlooked at their peril by heads of large health departments: that attention by the head administrator to the personal welfare of his staff pays big dividends.

The part devoted to school health is constructive and the authors recognise that school health covers a vast area. They detail the influence that the school health programme in American schools has upon the teaching of health to all age groups in relation to daily living. Similar teaching in the schools of our Welfare State might bring about a diminution in the future of unjustified calls upon our National Health Service. The need for appreciation by the administrator of the work of the school caretaker is not overlooked.

Altogether the book gives a comprehensive insight into a different method of health attainment in schools.

J. H. WHITTLES

EXCEPTIONAL CHILDREN, by F. G. Lenhoff. (George Allen and Unwin. 1960. Pp. 201. Price 21s.)

This book describes the residential treatment of emotionally disturbed (maladjusted) children at the author's school, Shotton hall in Shropshire. The contribution by Dr. Edward Glover, which in its precision and candour merits attention not commonly given to a preface, tells the reader that the author gives vitality and warmth to the formula "Solvitur docendo." Mr. Lenhoff's critics may well feel "Quot homines, tot sententiae." But the present writer is not a critic.

An exciting part of the book is to be found in the appendix (p. 198) where the author gives a specimen letter sent to prospective house mothers. Nothing could be better: he is indeed very fortunate to be able to attract workers of the calibre implied by his letter, so it is the more disappointing to find that they may stay at the school for the fairly short period of eighteen months. Would, however, that all homes could explain the views set out in the letter and, most importantly, understand that new staff members "face problems that may be close to their own feelings and they must come to terms with those feelings if they are to be of real help to the children."

Again, the appendix claims attention (p. 200) where the author gives a bad

report in negative terms compared with a report on the same child when some years older, expressed in positive terms. Under the heading of "General Progress" the negative report states that the child is often lazy and disinclined to work, but could do well. This contrasts with the positive report which tells us he is steadier and has done better work within very limited interests. Such is the difference between the cold criticism of a lazy child and the warm encouragement that seeks to foster effort by selective praise.

The chapter "Some of Our Problems" is one of particularly compelling interest. It deals with the attitudes of the author to pilfering, bedwetting, absconding, aggression, temper outbursts, sex and religion. The pleasing freedom from cant is clear. The reviewer is, thus, sorry to criticise the curious simplification in an attempted definition of Christianity (p. 122) and the assumption that religious training is associated with regimentation: it is hoped, too, that the conclusions in the last few lines of this chapter do not smack of spiritual pride. But it is uncharitable to cavil at what is slackly defined, for the real interest in the chapter is the belief that the sin is not so important as the sinner, and that the sin, not the sinner, should be deplored.

This book can be read with great advantage by psychiatric social workers, probation officers, children's officers, magistrates and others who seek to make maladjusted children happier, as an approach both more imaginative and, in its artistic way, more practical than are techniques found in some children's homes and approved schools. Presumably, however, Mr. Lenhoff can refuse or accept pupils as he wishes, and thus can establish a homogeneous group, or at least one in which the members do not provoke each other. While this is perfectly proper, we must remember that no such choice is possible for the remand home superintendent, the matron of a children's committee home or the headmaster of an approved school and that, therefore, the problems in the last can be more shattering to the institution than are those at Shotton Hall.

The author's discussion in the chapter on "The Problem of Learning" shows what so often needs demonstration: that maladjustment does not stop at the class room door, but shows its symptoms as actively in a class as it does socially. It is certain that the supportive environment the author provides is a necessary prerequisite to satisfactory educational fulfilment. One regrets that the reference to the General Certificate of Education examination (p. 81), although this could never be a test of adjustment or mental health, did not give information about the precise examination results. The brilliant summary given by two of Mr. Lenhoff's staff (p. 85), on the complicated network of qualities a teacher should have, is worthy of a full chapter.

Throughout the book, the importance of relationships between adults and children is rightly stressed. Clearly many of the successes described in the book depend upon this factor. Are there, however, some children who despite all effort, are not susceptible to Mr. Lenhoff's approach?

The school handles explosive material in its pupils and the last chapter refers to the co-operation that exists between the school and outside bodies such as clinics, visitors, neighbours and local education authorities. Apparently the school succeeded marvellously in explaining its methods locally, and in building up an excellent spirit in public relations to replace the original hostility in the district.

There is no doubt about Mr. Lenhoff's devotion to the point of view, and to the cure, of his pupils. The present reviewer, in his capacity as the chairman of a juvenile court, often realises that the therapeutic environment of a Shotton Hall promises a better prognosis for a child than would a more repressive or less inspired environment. In view of criticisms levelled, often with little factual content, against progressive schools for maladjusted children, it is a pity the author did not give some statistics of "cures" and "failures", which would surely compare very advantageously with results achieved by less radical methods. And he could well have included further treatment of techniques used to demonstrate the differences between right and wrong, gratitude and greediness and the demands a less psycho-analytically orientated society, in which the pupils must ultimately live, will make upon them.

Whatever the criticisms, the book is pleasant and readable, and it is worthy to be on the shelves of any educational library.

OTTO L. SHAW

LEARNING TO LOVE : A Wider View of Sex Education, by Alan H. B. Ingleby. (Robert Hale. 1961. Pp. 142. Price 10s. 6d.).

I opened this book fearfully, expecting a rehash of familiar material. There is in fact little new, but the treatment deserves the highest praise. Every page is readable and refreshing. Homer may nod but Mr. Ingleby does not.

On the first page we are warned not to equate "sex education" with "the facts of life": instead, Mr. Ingleby equates it with "education for family life". He writes: "If we would teach our children wisely about sex, then first we have to show them the meaning of love". This conviction is developed through sixteen sensible chapters which touch on breast feeding, bedwetting, frustration, smother-love, pets, nakedness, conscience, pocket money, self control, sex play, religion—and much else.

Almost every page contains good advice, offered with humility, understanding and an engaging warmth. How comforting to read, for example: "Imperfect parents are not a bad preparation for life in an imperfect world".

Controversial questions are dealt with courageously. The discussion "Is chastity out of date?" is a superb example of objectivity and restraint. The arguments are not original, but the approach will commend itself to young people who would be repelled by dogmatism.

Most of us would be more understanding parents through reading *Learning to Love*, and one feels churlish in criticising the book's defects. Mr. Ingleby tells us that "a child models himself on his parents" and "imitates" them; but he does not mention "identification", which is surely a more profound concept. Again, certain "actions displease us and cause us to withdraw our love"; but no child should be able to "cut himself off from his mother's love" through naughtiness: he should know he is loved always, especially if he has to be "punished". Or, of illegitimacy: "....A girl may passionately want to keep her baby. Perhaps we can make this possible by accepting the child into the family, or in some other way that will provide the security it needs": there is no mention of the terrible complications involved in such an expedient, nor does the author apply his own criterion of doing "what is best *for the child*". And he ends the book on a false note: it is just not true that our love "knows no jealousy . . . is never selfish, never irritated, never resentful". In any case, Paul was writing of Christian *agape*.

Mr. Ingleby claims that his book presents "a wider view of sex education" and thereby invites comparison with other authorities. He appears to be unaware that this wider view was expressed nearly twenty years ago by Dr. Cyril Bibby in his *Sex Education*, and fifty years ago by Havelock Ellis.

If such deficiencies can be removed from later editions, *Learning to Love* may become the classic it deserves to be.

VINCENT LONG

PLANNING MEALS, by F. Le Gros Clark and E. Margaret Gage. (Methuen & Co. Ltd. 1960. Pp. 73. Price 6s.).

This is described as an introductory book for the use of beginners and was first published in 1951 by the Association of Teachers of Domestic Subjects. It has now been revised and given an index. The foreword states that the book is "well within the compass of the average secondary modern school child, for whom it is mainly intended".

There are 53 pages of text by F. Le Gros Clark, and 17 pages of planned questions by Miss Gage, with two pages of micro-photographs. The text is liberally illustrated with marginal drawings by Miss Alice Lamb.

The contents include chapters on most aspects of nutrition; there is discussion on the value of milk, proteins and the protective foods. Two chapters are devoted to vitamins, and the history of the discovery of an empirical cure for scurvy is related in chapter 15. There is comment on school meals and tinned foods.

This short book is factually accurate, and the message of the "balanced diet" is cogently presented. The paragraphs on the use of salads are useful and may stimulate future mothers to depart reluctantly from the time-honoured fish and chips or roast and two veg. The general style is intimate and will probably appeal to the average thirteen-year-old. But there is a tendency to monotony in sentence and phrase construction. The general choice of material for discussion is excellent; perhaps the best chapter is that on Making Meals Attractive.

The Questions and Quizzes section would be useful to stimulate thought and discussion. Perhaps a few illustrative recipes might have been included. The book is not intended to be a recipe book, of which there are already an alarming number, but reading about food whets the appetite, literally and in the sense that it initiates the urge to experiment with food.

However, the authors succeed in their task of teaching the value of planned and balanced meals.

D. J. GORDON-SMITH

OTHER BOOKS RECEIVED.

A DAY IN CEYLON, photographed by Gordon Boshell. (Orient Longmans for World Health Organization. 1961. Pp. 60. Price Rs. 4.25).

NEPAL TODAY. An Introduction in pictures to the Kingdom, its people and their progress towards health and prosperity, photographed by Gordon Boshell. (Orient Longmans for World Health Organization. 1960. Pp. 52. Price Rs. 3.50).

WHO'S WHO—AND WHY, by Roger Pilkington. (Delisle. 1961. Pp. 110. Price 5s.).

SEXUAL FEELING IN MARRIED MEN AND WOMEN, by G. Lombard Kelly. (Perma Books, New York. Pp. 178. Price 3s. 6d.).

THE PLACE OF PHYSIOLOGY IN UNIVERSITY EDUCATION, by J. A. B. Gray. (An Inaugural Lecture delivered at University College, London, 23 February, 1960. H. K. Lewis & Co. Ltd. Pp. 16. Price 2s. 6d.).

FILMSTRIPS

ANATOMY AND PHYSIOLOGY : produced by Camera Talks Ltd. Colour. Teaching notes. Price £2 12s. 6d. each.

1. The Heart
2. Blood Vessels and Circulation
3. The Nervous System
4. Peripheral Nervous System
5. The Digestive System
6. The Liver, the Pancreas and the Processes of Digestion
7. The Respiratory System
8. The Urinary System
9. The Lymphatic Glands
10. The Endocrine Glands (in production)

Clear, concise and simple drawings are obviously of the first importance in teaching anatomy. Similarly, a simple, uncomplicated text is useful in teaching the basic principles of physiology. And adequate instruction in both these topics is essential for a working knowledge of the structure and function of the human body.

The drawings in this series of filmstrips cannot be faulted on the grounds of simplicity and clarity, nor with regard to accuracy. The various systems of the body are dealt with in some detail, beginning with the heart and ending with the endocrine glands. Separate strips are devoted to the central and peripheral nervous systems, the digestive system, respiratory system, etc. The number of frames in each strip varies from 24 to 38. The sequence of frames is logical and coherent and should be fairly easily comprehended by those receiving instruction.

One of the greatest difficulties in preparing a teaching series of this nature is to choose language and a presentation which is uniform and which is specifically designed with a particular audience in mind. Such a task is particularly difficult for the expert, who is so familiar with technical terms that they have become standard vocabulary. And in this respect the teaching notes show variations which make it difficult, at first reading, to assess for what type of audience the notes are designed. For example, in the strip on the digestive system it is stated : "The tongue is the organ of taste"—which should be common knowledge to any five-year-old. Later on it is stated : "The outer coat (of the stomach) is serous membrane which is composed of simple squamous epithelium". This implies a knowledge of histology, and would probably be intelligible only to advanced M.B. students or final year nurses. But on the whole Irene Ashley-Carter is to be congratulated on her production, and the strips will be of undoubted value in medical schools, teaching hospitals and zoology classes.

The artwork by Patricia Adamson is excellent.

D. J. GORDON-SMITH

Printed in Great Britain by Jordison & Co. Ltd., London & Middlesbrough.